

The Rufford Foundation Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Kerri Wolter
Project title	Captive breeding programme for vulture population supplementations
RSG reference	19100-2
Reporting period	Final
Amount of grant	£4,987
Your email address	Kerri.wolter@gmail.com
Date of this report	30 November 2016

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Establish a suitable release site for both cliff and tree nesting vulture species that is safe, easily accessible, and will stimulate natural wild behaviour in released birds.				The release site has been secured as VulPro has gained full agreement from the landowners. The acclimatisation enclosure construction is in preparation and will be finished within the next 3 months (by February 2017).
Supplement the existing Magaliesberg Cape Vulture population with viable, free-ranging captive bred individuals which require minimal long-term management				The captive bred, released chicks, released in February 2015, have not yet left our breeding facilities for more than 4 days at one time. Technically they are able to leave at their will, i.e. are free-ranging, and are therefore considered members of the Magaliesberg population. However, as they have not fully integrated behaviourally into the wild population by foraging outside of VulPro's proffered food, we consider this objective only partially realised.
Successfully breed parent reared African white-backed, lappet-faced, and white-headed vultures in captivity.				This year we hand-raised an African white-backed vulture chick to 1.5 weeks old, but were unsuccessful in returning him to his parents. His parents abandoned the dummy egg earlier than expected and reacted violently to the chick when he was placed in the nest. We believe one pair of lappet faced vultures have bonded, but they did not produce an egg this year.
Update VulPro's published protocols for egg collection, artificial incubation, and housing of Cape vultures				Version 2.0 was produced and published on our website in December 2015.
Increase Cape vulture captive breeding				Our breeding programme had the highest success to date in 2016 with

programme productivity to 45% chick survival to fledgling in 2016				50% success from fertile egg to fledglings. We currently house 7 chicks in our captive breeding enclosure which are being cared for by their parents.
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2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

This year we initiated new protocols in which we hand raise every chicks for 2 weeks before returning them to their parents. Notably this means this year we assisted in the hatching process for far more chicks than in previous years. Because of this factor, and possibly a bacterial infection in some adult females, we had to suddenly deal with developmental issues never before handled by our staff; several chicks hatched in critical condition. If we would have returned these eggs to the parents, instead of hatch them ourselves, the chicks would surely have not survived. Two were hatched with their yolk stump not fully closed. Several chicks were not able to internally or externally pip without assistance. One chick was hatched with the yolk sac not absorbed into his abdomen. All of these cases were given every effort afforded to us, including contacting avian veterinary experts in the UK. We were able to save all but one of these problem chicks to return them to the parents. However in one survivor we noted skeletal development issues at 7 weeks old and unfortunately had to euthanise her. Dealing with these issues has lead us to organize to host an 'Avian Incubation Workshop' which will be held over 3 days in January 2017. World raptor breeding experts Jemima Parry-Jones and Avian specialist veterinarian Dr Neil Forbes will instruct our team, as well as a small group of other conservation professionals from Southern Africa, on incubation, hatching, and neo-natal care of raptors.

3. Briefly describe the three most important outcomes of your project.

- **VulPro's first African white-backed vulture chick:** This year we successfully raised our programme's first African white-backed vulture chick. As this species was recently up-listed to 'Critically Endangered', we are thrilled at the prospects for the future in supplementation and reintroduction programmes for the species.
- **Successful new protocols:** This year was the first year we attempted to hand-raise chicks for 2 weeks before returning them to the parents. We obtained amazing success with this method, with only one Cape vulture pair rejecting a chick. In this case, we were able to intervene in time and gave the chick to another foster pair. Not only did the parents accept 2-week-old chicks in place of their dummy eggs, but by using this method we were able to increase our productivity to ensure the survival of several chicks which would not have survived hatching in the breeding enclosure.
- **Steep learning curve with early hatching / developmental issues:** While this may not be a nice outcome, it has been very instrumental in our programme

as all our staff have learned a great deal about neo-natal care of vultures. Due to the circumstances of this season, we are all now better prepared and experienced for future emergencies.

4. Briefly describe the involvement of local communities and how they have benefited from the project (if relevant).

N/A

5. Are there any plans to continue this work?

Absolutely. Over the last year we have acquired several additional non-releasable birds from our rehabilitation efforts and acquisitions from other facilities. This has expanded the potential for our breeding programme, notably including three adult lappet-faced vultures with another planned for arrival at VulPro within the next 2 months.

To facilitate the full integration of captive bred Cape vulture chicks into the wild, within the last 6 months we initiated construction of an acclimatisation enclosure on the top of the Nooitgedacht Cape vulture breeding colony in the Magaliesberg Mountains. This enclosure will house captive bred chicks for several years before release. Additionally, just this last month we engaged with the Namibian government and invested Namibian NGOs and are planning to collaboratively pursue a Cape vulture reintroduction programme in the northern part of the country using VulPro's captive bred chicks.

In addition to our growing captive Cape and lappet-faced vulture populations, our resident African white-backed vulture population is growing, necessitating additional enclosures. A large (40m X 9m X 9m) enclosure specifically designed to house breeding African white-backed vultures, is almost complete. We hope to introduce birds into the enclosure by the end of the year and that this space will facilitate pair bonding and breeding.

6. How do you plan to share the results of your work with others?

We continually update our captive breeding protocols which are published on our website and distributed freely upon request. The successes, failures, and outcomes of our captive breeding programme are summarised in monthly reports that are distributed via an email listserv to all donors and interested parties.

Within the last year, VulPro has received substantial increased international recognition. A result of this focus is an increased frequency of requests from organisations for our assistance in initiating vulture-focused conservation projects. The most exciting of these is the first ever wildlife conservation programme in Nigeria. Nigeria has been highlighted as one of the most desperate countries for vulture conservation intervention. There is literally no knowledge of the current situation, other than dire reports of major trade in vulture parts for cultural uses and anecdotal reports of drastically diminished population numbers. We are planning to travel to

Nigeria early next year to advice on initiating a conservation programme in the country. With time, this has the potential to be a critically important breeding programme for hooded vultures and other species in West Africa. We will share all of our results and expertise with the organisations and people involved via direct communication, reports, protocols, and travelling to show them first hand.

7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?

The funds were spent immediately to purchase the items (February and March 2016). The brooders, hatcher, and air conditioning unit were used from April through September 2016. The breeding season is finished, but as our captive breeding programme is on-going, these units will be used annually for 6 months every year during the breeding season.

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

Exchange rate used:

1£ sterling = 22.413 South African Rand (as of 26 February 2016, date of unit purchases)

Item	Budgeted Amount	Actual Amount	Difference	Comments
Grumbach Hatcher	1,750	1,675	75	Difference due to change in exchange rate from date of application to date of payment
Brinsea Brooder x3	1659	1106	553	Only two brooders were purchased because the cost for transport increased from the value budgeted, We were not able to purchase three units.
Courier expenses	50	406	-356	371 (brooders) + 35 (hatcher)
Admin expenses (10%)	450	850	-400	Due to the intensity of hand-raising the chicks and treating many of the newly hatched, additional admin expenses were incurred throughout the use of the equipment.
Import taxes (14%)	478	310	168	Only one brooder purchased
Air conditioning unit	600	600	0	

9. Looking ahead, what do you feel are the important next steps?

The Cape vulture programme consumes the majority of our time, as the majority of breeding birds in are facilities are Cape vultures. However, we must not lose focus on the other species that are still in steady decline. It is imperative that we forge ahead to develop successful breeding and supplementation protocols for lappet-faced, African white-backed, and white-headed vultures. There is a need for implantation of hooded vulture and bearded vulture reintroduction programmes as well. There is so much more work to be done to save all of these species.

We have made great strides in securing a new release site on the Magaliesberg Mountains. Construction will commence and be completed in the next few months. It is critical that this is finalised soon so captive bred chicks from this year and 2015 can be moved to start to acclimatise to their surroundings before release (in 1 to 2 years time).

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

The Rufford Foundation was noted in all presentations given to school groups, landowners, meetings, and academic work in which the captive breeding programme was mentioned. Notably, the Rufford Foundation was highlighted in VulPro's presentation at the Pan-African Ornithological Congress in Dakar Senegal in October 2016.

11. Any other comments?

VulPro would like to take this opportunity to once again thank the Rufford Foundation for your continual support. The equipment purchased with these funds has infinitely increased the ease at which we conduct our work and have allowed our programme to expand substantially.